

Remarks

This application has been carefully reviewed in light of the Non-Final Office Action dated October 25, 2007. Claims 20, 27, 29, and 30 have been cancelled, and claims 1-4, 21-25, and 28 have been amended. Claims 1-4, 21-25, 28, 32, and 33 are currently pending. Further review and reconsideration is requested in light of the following remarks.

1. Information Disclosure Statement

An IDS citing a reference from a related foreign application is submitted herewith.

2. Rejection Under 35 U.S.C. §103

Claims 1-4, 20-25, and 28-33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over by US Patent 4,050,237 (Pall et al.) in view of US Patent 3,077,736 (Feeley, Jr.). This rejection is respectfully traversed.

Pall et al. describes a gas turbine engine including a sump and associated structure for lubricating rotating bearings. The sump is provided with a vent line 39 for relieving pressure therein by venting oil-laden air.

Feeley, Jr. describes a gas generator which is useful for directing pressurized gas to the turbine wheel of a turbosupercharger of a piston engine, in order to accelerate the turbine rapidly from a low-speed condition. When required, the gases are generated by igniting a combustible charge 29 (see Figure 1). The combustion gases are then routed to the turbine 6. Several embodiments are taught. Common to each embodiment is an ejector-like means for mixing cool air with the combustion gases (e.g. item 25 in Figure 1; item 93 in Figure 4; items 106 in Figure 6).

The rejection states that it would have been obvious to modify Pall et al. with the teachings of Feeley, Jr. to arrive at the claimed invention. Applicant respectfully disagrees. While Pall et al. does

mention the need to prevent excessive pressure in the sump (see column 1, lines 15-17), neither reference recognizes the problem of modulating the pressure in a turbine engine oil sump so as to maintain adequate seal pressurization flow both at idle and at high pressure conditions. Furthermore, Feeley, Jr. is a generic ejector device unrelated to the oil sump or bearing field, and in each case the inlet of the eductor communicates with the atmosphere or a fluid source external to the target internal combustion engine. The disclosed apparatus clearly would not be useful for reducing vent exit pressure in a sump, as it is designed to generate pressurized gases (i.e. increase pressure) under conditions where the available pressure for operating the turbine is too low.

Independent claim 1 has been amended to more particularly point out the above-noted distinctions. Specifically, among other elements, it specifies that (1) the sump vent exit pressure is reduced by the operation of an eductor in fluid communication with the sump vent; and (2) the eductor includes a restriction downstream of the sump vent. These limitations are not believed to be disclosed or suggested by the cited prior art, for the reasons noted above. Accordingly, it is submitted that the rejection should be withdrawn.

Each of claims 2-4, 21-25, 28, 32, and 33 depends from and further limits amended claim 1. They are thus believed to be allowable for the reasons set forth above.

3. Claim Objections

Claim 27 has been objected to as depending upon cancelled claim 26. Claim 27 has been cancelled and the objection is thus moot.

Conclusion

In light of the above, reconsideration of the rejections and objections is requested. Allowance of 1-4, 21-25, 28, 32, and 33 at an early date is solicited.

If any extension of time is required in connection with this paper, petition is hereby made therefor. If any fees are due in connection with this paper, the Director is authorized to charge them, or credit any overpayments, to Deposit Account No. 50-4137.

Respectfully submitted,
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